

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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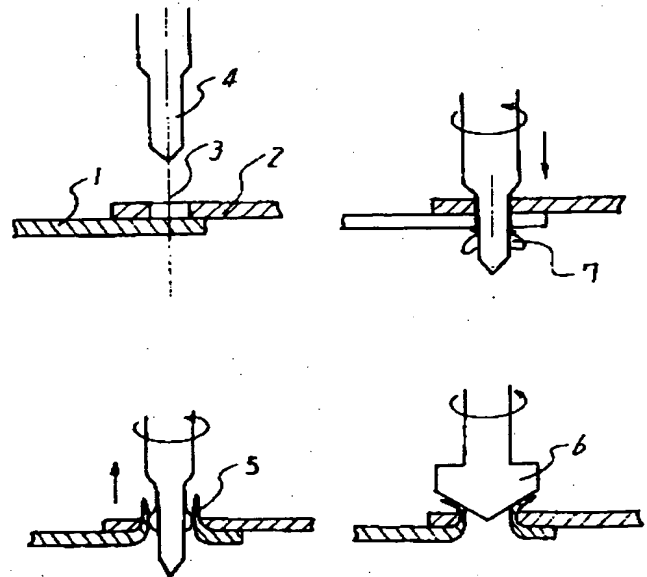
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APPLICANT : HITACHI LTD;

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TITLE : FASTENING METHOD OF METALLIC  
PLATE



**ABSTRACT :** PURPOSE: To fasten spottedly metallic plates at a low cost with a simple binding operation by drilling a hole in the superposed metallic sheets with a burring drill and flaring the burred part to the outside in the form of pulling upward the same in the stage of returning the drill after forming the burred part.

**CONSTITUTION:** An upper iron plate 2 which is drilled with a hole is superposed on a lower iron plate 1, and the tip of a burring drill 4 is pressed to the center of a hole 3. The drill 4 is rotated at a high speed and is penetrated through the plate 1 to drill a hole therein. The drill 4 expands vanes 7 upon drilling the hole. A burred part 5 is formed in the form of pulling upward the metal around the hole in the stage of pulling up the drill 4 having the expanded vanes 7. The burred part 5 projecting above the plate 2 is flared to the outside by a roll expanding jig 6, by which both plates 1, 2 are fastened. The spot-like fastening of the metallic plates is made possible by the simple binding operation without heating and using any rivet according to the above-mentioned method.

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